**preliminary Area of Interest (pAoI)**

**Submission Form**

INSTRUCTIONS

The following form should be used to submit a nomination for an Important Shark and Ray Area (ISRA) preliminary Area of Interest (pAoI).

A pAoI is an area proposed for consideration during an ISRA regional workshop. The aim of an ISRA workshop is to undertake a critical evaluation of proposed pAoIs, explore the scientific information basis for proposing these areas, and determine which areas can become candidate ISRAs (cISRAs).

If available evidence supports the application of the [ISRA Criteria](https://sharkrayareas.org/isra/selection-criteria), the pAoI will move to cISRA status during the regional workshop.

When submitting a pAoI, we encourage you to provide clear information that supports the Criteria. Complete and accurate submissions are more likely to be successful if the ISRA Criteria are well justified. Please note that areas delineated need to be based on contemporary importance. **Information from the last 15 years is considered contemporary***.*

The following resources should be consulted when preparing a pAoI submission form:

* [*ISRA Guidance on Criteria Application*](https://drive.google.com/file/d/1Jl2sQuV1Nmj2uSVj_8qNr5Q00Q0Fk3bK/view?usp=share_link)
* [*ISRA Style Guidelines*](https://drive.google.com/file/d/1F-HTKA86KUT_WXMIWSZoVaKCS6ADD_XT/view?usp=share_link)

This form is divided into eight sections to allow for details on the following to be provided:

(1) general information on contributors and details of the proposed area

(2) information on species that occur within the area;

(3) details on ISRA Criteria being applied. ***This is a key section of the proposal. Please make sure the information you have for the area and the Qualifying Species is enough to support this submission****;*

(4) polygon highlighting the area boundaries;

(5) details of the habitat in the proposed area;

(6) broad summary/abstract of the area being proposed;

(7) supporting information (optional); and

(8) references.

Instructions on how to complete each section are provided below and in the *ISRA Style Guidelines*. Ensure all relevant sections are completed.

Note: The term ‘shark’ is used here to encompass all living chondrichthyans (sharks, rays, and chimaeras).

Please carefully follow the *ISRA Style Guidelines* when completing this form. Information entered in this document may be included in various ISRA products including the ISRA website, e-Atlas, and ISRA Factsheets.

If you encounter any difficulties completing this form, please [contact us](mailto:submissions@sharkrayareas.org)

SECTION 1 – SUMMARY

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| **1.1 Points of Contact**  *List all persons involved in the preparation of this submission. We encourage submissions from consortia to strengthen the submission through varied knowledge and experience.*  *Note that names and affiliations will be published on ISRA products.* | |
| **Full Name**  *For multiple names, enter each on a separate line, separated by semicolons and include abbreviations, e.g.,*  *Rima W. Jabado (RWJ);*  *Daniel Fernando (DF).* | Alexandra E. DiGiacomo (AED);  Evan Byrnes (EB);  Sammy Andrzejaczek (SA);  Salvador Jorgensen (SJ);  Barbara A. Block (BAB) |
| **Affiliation**  *For multiple organisations, enter each on a separate line, separated by semicolons AND provide affiliated author(s) in brackets, e.g.,*  *Elasmo Project (RWJ);*  *Blue Resources Trust (DF);*  *IUCN SSC SSG (RWJ; DF).* | Stanford University (AED; EB; SA; BAB); California State University, Monterey Bay (SJ) |
| **Email**  *For multiple emails, enter each on a separate line, separated by semicolons AND provide affiliated author(s) in brackets, e.g.,*  *rimajabado@.......com (RWJ);*  *daniel@........org (DF).* | [alexandra.digiacomo@stanford.edu](mailto:alexandra.digiacomo@stanford.edu) (AED);  [eebyrnes@stanford.edu](mailto:eebyrnes@stanford.edu) (EB);  [sajorgensen@csumb.edu](mailto:sajorgensen@csumb.edu) (SJ);  [sammyaz@stanford.edu](mailto:sammyaz@stanford.edu) (SA);  [bblock@stanford.edu](mailto:bblock@stanford.edu) (BAB) |

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| **1.2 pAoI Name** Character limit: 40 characters  *Provide a short, descriptive, geographically identifiable name for the pAoI. Avoid generalised and easily confused names such as ‘Eastern Pacific ISRA’ but rather use a name that refers to distinctive features that best represent the uniqueness and importance of the area.* |
| Monterey Bay |

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| **1.3 Geopolitical Details** Word limit: 20 words  *Provide the name of jurisdictions (e.g., country, state, province, department) that the pAoI falls in. If the pAoI spans multiple jurisdictions (e.g., a migratory corridor) please list all jurisdictions.*  *If the pAoI is in international waters, indicate that the pAoI is in Areas Beyond National Jurisdiction (ABNJ).* |
| United States of America, California, Monterey County and Santa Cruz County |

SECTION 2 – THE SPECIES

**2.1 ISRA Qualifying Species and Qualifying Criteria**

*Provide a complete list of Qualifying Species (*in alphabetical order by scientific name*) occurring in the pAoI and the ISRA Criteria/Sub-criteria that they meet. Each species listed in Section 2 as meeting ISRA criteria should be detailed here. Qualifying Species satisfy one or more of the ISRA Criteria within the area. Do not include species that occurred historically but that no longer occur, or vagrants that do not normally occur in the area.*

*Insert and delete rows as needed.*

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| **Scientific Name1** | **Common Name1** | **IUCN Red List Category2** | **Global Depth Range (m)1** | **ISRA Criteria/Sub-criteria Met (mark with an ‘X’)** | | | | | | | | |
| **A** | **B** | **C1** | **C2** | **C3** | **C4** | **C5** | **D1** | **D2** |
| **SHARKS** |  | | | | | | | | | | |  |
| *Carcharodon carcharias* | White shark | VU | 0-1277 | X |  |  |  |  | X |  |  |

**2.2 Supporting Species**

*Provide a complete list of Supporting Species (in alphabetical order by scientific name) occurring in the pAoI. Supporting Species are present in the area, but they do not satisfy ISRA Criteria. Do not include species that occurred historically but that no longer occur, or vagrants that do not normally occur in the area.*

*Insert and delete rows as needed.*

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| **Scientific Name1** | **Common Name1** | **IUCN Red List Category2** |
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*1Species names and depth ranges should follow the regional species list/Inventory of Knowledge; the inclusion of any additional species that are not on the regional list must be supported by information (e.g., references, photos) to allow verification of their presence at the site; any invalid species names/concepts may be changed by the ISRA team to reflect current accepted taxonomy.*

*2IUCN Red List of Threatened Species categories are provided in the Inventory of Knowledge or are available by searching species names at* [*www.iucnredlist.org*](http://www.iucnredlist.org) *Use abbreviations as follows: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient; NE, Not Evaluated.*

SECTION 3 – THE CRITERIA

*Each field below is* ***only required if the area meets the ISRA Criteria/Sub-criteria.***

*Provide justifications on how the ISRA Criteria/Sub-criteria are met for each species.*

*Provide citations to supporting information and include the references in Section 8 of this form.*

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| **3.1 Criterion A – Vulnerability** Word limit: 200 words  *Areas important to the persistence and recovery of threatened sharks (****this criterion must be associated with an additional criterion describing the type of usage of the area by the species****).*  *Threatened species are those that fall in the IUCN Red List categories Critically Endangered, Endangered, or Vulnerable, or those that have been evaluated as threatened under a national extinction risk assessment framework.*  *Provide a summary of threatened species occurring in the pAoI.* |
| One Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occurs in the area. This is the Vulnerable White Shark *Carcharodon carcharias* (Rigby *et al.*, 2019). |

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| **3.2 Criterion B – Range Restricted** Word limit: 100 words  *Areas containing a regular and/or predictable presence of range-restricted sharks which are occupied year-round or seasonally.*  *Under Criterion B, range-restricted sharks are defined as species whose distribution is entirely limited to one Large Marine Ecosystem (LME) or two adjoining LMEs. For each Qualifying Species listed under Criterion B, specify which LME(s) they are restricted to, or note if the pAoI falls outside LMEs (which do not cover all global waters).*  *The list of species that can meet the Range Restricted criterion can be found in the regional ‘Inventory of Knowledge: Geographic Ranges of Sharks, Rays and Chimaeras’ document.* |
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| **3.3 Criterion C – Life-History** Word limit: 100 words per species per sub-criterion |
| *Provide information on what activities Qualifying Species are undertaking in the area that meet the relevant sub-criterion.* |
| **3.3.1 Sub-criterion C1 – Reproductive Areas**  *Areas important for sharks to mate, give birth, lay eggs, or provide advantage to the young, and which support sharks at various lifecycle stages.* |
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| **3.3.2 Sub-criterion C2 – Feeding Areas**  *Areas that are important for shark nutrition at one or more lifecycle stages.* |
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| **3.3.3 Sub-criterion C3 – Resting Areas**  *Areas that are important for sharks to rest and conserve energy, often related to environmental conditions or temporal factors.* |
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| **3.3.4 Sub-criterion C4 – Movement**  *Areas used by sharks regularly or predictably during movement, such as migrations, which contribute to connectivity of important areas.* |
| The area in the boundaries we propose is a regular movement corridor for juvenile and sub-adult Northeast Pacific white sharks (DiGiacomo *et al.*, 2026; Block, unpublished data). Research groups at Stanford University and California State University Monterey Bay (CSUMB) have tagged white sharks in aggregations within the proposed region (New Brighton, Marina) with acoustic transmitters from 2022-2025. Of individuals with acoustic transmitters (n=45), annually, 11/12 juvenile sharks make at least one connection across sites (see map in Supporting Materials), as well as 10/13 sub-adults, and 9/20 adults. Of the available connections (n=9) , or ‘edges’ linking sites in Monterey Bay, juveniles used on average 52.5% of available edges (4.72 connections per individual), sub-adults used 43.3% of available edges (3.9), and adults used 14.8% (1.33) of available edges. The average number of annual movements between sites for an individual white shark were 19.9 (juveniles), 12.8 (sub-adults), and 1.7 (adults). |
| **3.3.5 Sub-criterion C5 – Undefined Aggregations**  *Areas where an assemblage or aggregation of sharks regularly and/or predictably occur, year-round or seasonally, which can be undefined but likely linked to a vital function or life-history activity.* |
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| **3.4 Special Attributes** Word limit: 400 words for each Sub-criterion |
| **3.4.1 Sub-criterion D1 – Distinctiveness**  *Areas with sharks which are biologically, behaviourally, or ecologically distinct.*  *Provide details of distinct or unique biological, behavioural, or ecological characteristics displayed by Qualifying Species in the pAoI.* |
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| **3.4.2 Sub-criterion D2 – Diversity**  *Areas that sustain an important diversity of sharks.*  *The threshold number of species for the attribution of Sub-criterion D2 is dynamic and is set independently for each ISRA region. It is specified in the regional ‘Inventory of Knowledge: Geographic Ranges of Sharks, Rays and Chimaeras’ document.*  *Provide the number of ISRA Qualifying Species known to occur in the pAoI if D2 is met.* |
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SECTION 4 – AREA POLYGON

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| **4.1 Area Polygon**  *Provide a polygon delineating the area boundaries; preferred tools are Google Earth or QGIS.* |
| *A map of a body of water  AI-generated content may be incorrect.* |
| **4.2 Boundary Delineation**  *Describe how the boundaries were defined including depth-contours, continental shelf limits, canyons, seamounts, coastal features (e.g., estuaries, river mouths), etc.* |
| The polygon is delineated by the coastline of Monterey Bay, with a ~1km coastal buffer that encompasses the majority of the acoustic telemetry network. |

SECTION 5 – THE AREA

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| **5.1 Habitat** Word limit: 400 words  *Provide a description of the location, geography, oceanography, biological processes, and habitat features of the area.*  *Include static, spatially bound, habitat and/or environmental conditions, including the geographical extent of habitat features (e.g., continental shelves, continental slopes, seamounts, coral reefs, seagrass beds, mangrove forests, estuaries, rivers), and dynamic habitat and/or non-permanent environmental conditions, including the regular and/or predictable occurrence of fronts and eddies, upwellings, and prey aggregations (including spawning events).*  *Information related to fisheries, threatening processes, or the importance of the area for any species (shark or other taxa) should not be included here.* |
| Please do not complete this section until someone from the ISRA team has confirmed that there is enough information for this proposal to be considered. |

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| **5.2 Area-based Management** Word limit: 50 words  *Specify the full name of any spatial management delineations that overlap with the area.*  *This may include protected areas,* *Key Biodiversity Areas (KBAs), Ecologically or Biologically Significant Marine Areas (EBSAs), Wetlands of International Importance (Ramsar Sites) or other relevant designations.* |
| The boundaries proposed lie in the Monterey Bay National Marine Sanctuary and contain several Marine Protected Areas in the southern region including Pacific Grove Marine Gardens State Marine Conservation Area (SMCA), Lovers Point – Julia Platt State Marine Reserve (SMA), Edward F. Ricketts SMCA. |

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| **5.3 Bathymetry** Word limit: 50 words  *Provide the bathymetry of the area, noting the upper and lower depths in metres, along with a justification for the chosen depth range.*  *Add whether the area encompasses benthic, benthopelagic, or pelagic habitats. Note whether the area is subsurface (e.g., a subsurface pAoI might have a depth range of 200–600 m).* |
| This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 20 m based on the bathymetry of the area. |

SECTION 6 – SUMMARY / ABSTRACT

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| **pAoI Summary** Word limit: 200 words  *Provide an abstract-style summary of the pAoI. This should include the geographical location of the pAoI, an overview of key habitat features, overlap with other key area-based management approaches (e.g., protected areas, Key Biodiversity Areas), and a summary of the ISRA Criteria/Sub-criteria that are met with an example species for each.*  *Include both common names and scientific names of species in this section.*  *Examples are provided in the ISRA Style Guidelines.* |
| Please do not complete this section until someone from the ISRA team has confirmed that there is enough information for this proposal to be considered. |

SECTION 7 – SUPPORTING INFORMATION

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| *Provide any additional supporting information along with sources and captions. This could include information taken from the grey literature or unpublished sources including any relevant figures, distribution maps, sighting locations, data tables, graphs, images, or other material which supports the pAoI submission.*  *This could also include information on species likely meeting one of the Criteria in the area but for which insufficient information is currently available.*  *Make sure to provide sources for any included material and include the references in Section 8 of this form.* |
| A map of a country  AI-generated content may be incorrect.  **Figure S1.** Acoustic telemetry network analysis of white shark movements across site-grouped clusters of acoustic receivers in Monterey Bay (Block, unpublished data).  A chart of different colored circles  AI-generated content may be incorrect.  **Figure S2**. Abacus plot of acoustic detections from tagged white sharks demonstrate repeated connections between coastal sites in Monterey Bay (Block, unpublished data). |

SECTION 8 – REFERENCES

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| *Provide a reference for all material cited in this submission. These can include the primary literature (i.e., scientific papers), reports, books, book chapters, theses, webpages, and databases.*  *Carefully follow the* [*ISRA Citation Style Guide*](https://drive.google.com/file/d/1F-HTKA86KUT_WXMIWSZoVaKCS6ADD_XT/view?usp=share_link)*.* |
| **Block, unpublished data**. Block Lab, Unpublished Acoustic Telemetry Data.  **DiGiacomo AE, Andrzejaczek S, Block BA**. **2026**. Ontogenetic shifts in morphology and ecology of eastern Pacific white sharks revealed by computer vision analysis (in review at PLOS One).  **Rigby C, Barreto R, Carlson J, Fernando D, Fordham S, Francis MP, Jabado RW, Liu KM, Marshall A, Pacoureau N**. **2019**. White shark (Carcharodon carcharias). *IUCN Red List of Threatened Species E. T3855A2878674* 3. |

**SUBMISSION**

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| *Complete your submission by sending this form together with the polygon GIS file (as a shape file with all its auxiliary files, or KML file), to* [*Dr Emiliano Garcia-Rodriguez*](mailto:submissions@sharkrayareas.org)*. Rename the form using the pAoI name, e.g., pAoI submission\_Coiba Island* |